

Title (en)
ACTIVELY SWITCHED BUS CAPACITOR

Title (de)
AKTIV GESCHALTETER BUSKONDENSATOR

Title (fr)
CONDENSATEUR DE BUS À COMMUTATION ACTIVE

Publication
EP 3949096 A4 20221221 (EN)

Application
EP 20782254 A 20200314

Priority
• US 201916376405 A 20190405
• US 2020022858 W 20200314

Abstract (en)
[origin: US10797613B1] Disclosed are power supply systems and methods of operating the same. An exemplary power supply system includes a primary rectifier configured to rectify an AC voltage to produce a bus voltage on a DC bus and a voltage monitor configured to monitor the AC voltage. A capacitor is switchably coupled to the DC bus via a switch and a charger is configured to charge the capacitor with power from the DC bus. A switch controller is configured to close, in response to the voltage monitor indicating a sag in at least one phase of the AC voltage, the switch to enable the capacitor to discharge to the DC bus.

IPC 8 full level
H02M 1/14 (2006.01); **H02J 1/02** (2006.01); **H02M 7/217** (2006.01)

CPC (source: AU EP KR US)
G05F 1/56 (2013.01 - EP KR US); **H02M 1/0012** (2021.05 - KR); **H02M 1/0096** (2021.05 - KR); **H02M 1/10** (2013.01 - KR); **H02M 1/143** (2013.01 - AU); **H02M 1/327** (2021.05 - KR); **H02M 1/42** (2013.01 - AU); **H02M 1/4208** (2013.01 - KR); **H02M 7/02** (2013.01 - AU); **H02M 7/05** (2021.05 - KR); **H02M 7/06** (2013.01 - EP KR); **H02M 7/1557** (2013.01 - AU); **H02M 7/2176** (2013.01 - AU); **H02M 7/219** (2013.01 - US); **H03K 5/24** (2013.01 - EP KR US); **H02M 1/0003** (2021.05 - US); **H02M 1/0012** (2021.05 - EP); **H02M 1/0022** (2021.05 - AU); **H02M 1/0096** (2021.05 - EP); **H02M 1/10** (2013.01 - EP); **H02M 1/322** (2021.05 - AU); **H02M 1/327** (2021.05 - EP); **H02M 1/4208** (2013.01 - EP); **H02M 1/4283** (2021.05 - AU); **Y02B 70/10** (2013.01 - KR)

C-Set (source: US)
1. **H02M 1/42** + **H02M 7/217**
2. **H05B 44/00** + **H02M 7/12**

Citation (search report)
• [I] WO 2007003544 A2 20070111 - SIEMENS AG [DE], et al
• [A] JP 2002010528 A 20020111 - NISSIN ELECTRIC CO LTD
• [A] PETERSON M ET AL: "Voltage sag mitigation for a high frequency multistage power conversion system", INDUSTRIAL ELECTRONICS, 2008. IECON 2008. 34TH ANNUAL CONFERENCE OF IEEE, IEEE, PISCATAWAY, NJ, USA, 10 November 2008 (2008-11-10), pages 1057 - 1062, XP031825566, ISBN: 978-1-4244-1767-4
• See also references of WO 2020205211A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
US 10797613 B1 20201006; **US 2020321887 A1 20201008**; CN 113661642 A 20211116; EP 3949096 A1 20220209; EP 3949096 A4 20221221; JP 2022528122 A 20220608; JP 7510951 B2 20240704; KR 20210141553 A 20211123; TW 202110071 A 20210301; TW I842866 B 20240521; WO 2020205211 A1 20201008

DOCDB simple family (application)
US 201916376405 A 20190405; CN 202080026669 A 20200314; EP 20782254 A 20200314; JP 2021559037 A 20200314; KR 20217033050 A 20200314; TW 109111539 A 20200406; US 2020022858 W 20200314